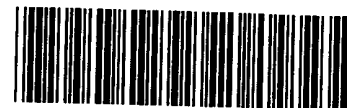


ENTERED
See page 6-9



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002

TIME: 08:42:12

Input Set : A:\SEQUENCE 081,327.txt

Output Set: N:\CRF3\07252002\J081327A.raw

3 <110> APPLICANT: Huang, Tim Hui-Ming
5 <120> TITLE OF INVENTION: HIGH-THROUGHPUT METHODS FOR DETECTING DNA METHYLATION
7 <130> FILE REFERENCE: 40629-2
9 <140> CURRENT APPLICATION NUMBER: US 10/081,327A
C--> 10 <141> CURRENT FILING DATE: 2002-07-11
12 <150> PRIOR APPLICATION NUMBER: 09/497,855
13 <151> PRIOR FILING DATE: 2000-02-04
15 <150> PRIOR APPLICATION NUMBER: 60/120,592
16 <151> PRIOR FILING DATE: 1999-02-18
18 <150> PRIOR APPLICATION NUMBER: 60/118,760
19 <151> PRIOR FILING DATE: 1999-02-05
21 <160> NUMBER OF SEQ ID NOS: 54
23 <170> SOFTWARE: PatentIn version 3.1
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 630
27 <212> TYPE: DNA
28 <213> ORGANISM: Homo sapiens
30 <220> FEATURE:
31 <221> NAME/KEY: misc_feature
32 <222> LOCATION: (1)..(630)
33 <223> OTHER INFORMATION: All n's are unknown
36 <400> SEQUENCE: 1

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DEC 27 2002

OFFICE OF PETITIONS

W--> 37	atgatttncg ctccttgata ttatcatctt gaacgaaagc tggtaaactc tggcttatgg	60
W--> 39	ataaaacaaa actttaccna tcgtatttgg gtagggggt ggggaatgga taactgttcc	120
W--> 41	ctctgctaaa atttttagcgt ntnaatcggg ggaatngagat ttgcataagt ttgacgggag	180
W--> 43	ggtcntgtnt tcgtttcaag tatgggtnat tgtccacacc ttttcttnaa gantngcgcg	240
W--> 45	gggggcctaa ttcgaanggt naanaaaana aggaagacng angtgccana atgnacccca	300
W--> 47	atccacanct tatggganan ctcccaacgc gttngatgca aacttgaatn tcnntactnt	360
W--> 49	cccctaaatn ncttgnggtt atcntggccn aactgtttcc tgnnttaaaa tnnttancg	420
W--> 51	ctccccattc cnccttannt acnaancggg aagctttaat tttnaanncc nggggtncc	480
W--> 53	aatganttaa ctaaccccct tanttncctt nnncccngc cegnttcnat ccggaaactn	540
W--> 55	ttttccccct ncnnttatta atccnccncc cccggaaaan gcggttgctt tntgggccct	600
W--> 57	ncctctctcc caatganccc cncccggntt	630
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61	<211> LENGTH: 913	
62	<212> TYPE: DNA	
63	<213> ORGANISM: Homo sapiens	
65	<220> FEATURE:	
66	<221> NAME/KEY: misc_feature	
67	<222> LOCATION: (1)..(913)	
68	<223> OTHER INFORMATION: All n's are unknown	
71	<400> SEQUENCE: 2	
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002

TIME: 08:42:12

Input Set : A:\SEQUENCE 081,327.txt

Output Set: N:\CRF3\07252002\J081327A.raw

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W--> 74 aggtcgacca taaggagnca ccagctcgcc ccacttcacc tncggcgng ctggacacga      120
      76 gctgggcgct ataatctgca gaacgtcccg ggccgaaaag gatggggaac acacctggag      180
W--> 78 ccagggcgaa gacatctaga gatgcaaagg gaatggaaga aaacccggnt aggttctctc      240
W--> 80 agagcaagac ccccttgctg gaaacatagg nttctaagcc cggtggtgg gagcaacagg      300
W--> 82 gtgggagAAC tNagactnca gcctgaactt agcgtncccc cacttgctn cccatnaaga      360
W--> 84 tcccgtattt ggcagggtcca gaccccgcca aacttcaaga ncccggcggt agggacaggc      420
W--> 86 aaacttgCag cgacangggg gaccCGaAcg gnacccccca ggaggggaan aaggggcngg      480
W--> 88 agatcagacc gttggtgnng gtngaattng gcnaaatntt ttNnaacaca cntggtggng      540
W--> 90 tggaaccttn aatccctttt tagntcncct tgncttgCac ctntnttagn ggggaaatcc      600
W--> 92 cctggggngn tntntncttt gcntngccaa ntggngngtn ngtnngnntt ttnttccatn      660
W--> 94 ntntntgggt tggcngatg tggggntntt ttcngnttn ncngngnctt tttggggnnn      720
W--> 96 aanatngncn ttattntggg ggaaananaa agcttggnaa ttttttgggg aaanttgNnn      780
W--> 98 cCnnCngggT nggnaangnn ttntttnttg nngntctant ncgntnnggt cCnttttNnc      840
W--> 100 cngttngng ngaggtncCC nccCnnnggn ngccttnggt tggggatttt tttggggcnc      900
W--> 102 ctgngnggtt tgg
      105 <210> SEQ ID NO: 3
      106 <211> LENGTH: 952
      107 <212> TYPE: DNA
      108 <213> ORGANISM: Homo sapiens
      110 <220> FEATURE:
      111 <221> NAME/KEY: misc_feature
      112 <222> LOCATION: (1)..(952)
      113 <223> OTHER INFORMATION: All n's are unknown
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W--> 119 anggccgcct ttatatcaen agggcgcccc gcctncaggt cgaccataat tccatccCag      120
W--> 121 gccatttCct tCctccgggg gtctttnta aaaganctcc ggnaccncct ccccatccc      180
W--> 123 tggagttgnt tctgcgcgga acttancCct ggggagagga ngtagcccg nctgtgaccc      240
W--> 125 cggcctttcg ganngtgntc tgcgtntCct tactggcccc tcccttgtc tccagatac      300
W--> 127 cctgtgtaac naactcgacc agnancggaa ggcgcggtta tgcattccagc anaaattgaa      360
W--> 129 aggtgcggaa ccggnaaaca aagatangag ggntnctgng tgcngccgt nctgcnactg      420
W--> 131 aatgaatgaa tagtgngact agtgaggaag nccaccatcc acngnggatc angatgtntg      480
W--> 133 anngataaaa ntggnaactg attttattgn gagagctccc aacgcattgg atgcatagct      540
W--> 135 tngagtatct ataagnnnca cctaaataac ttgaccnaat catgggcaat aactggnncc      600
W--> 137 tgtngaaaa tgnnatccct naccaanccn cacaacatnc taccCnaaa cCataaaagt      660
W--> 139 gtaaaaaaccn tgggggtccc caatnnantg aaccaacctc ncantnaatt nccntnnCnc      720
W--> 141 ctCacnanc ccttttcnaa cCnnaaaacc ctCctacccc actncattaa atgaanCnc      780
W--> 143 cccccccCct aaaaanccn ntttncaaat tngnccccct tncncCntc ctntanntan      840
W--> 145 tnnactccna tanctcngnc ctatCtntt tCnnannaac nnnatcaanc tnanncaaaa      900
W--> 147 nCnaaaannc cnatteccc naaaccnna gaaaaccCnn taaaaaacan tt      952
      150 <210> SEQ ID NO: 4
      151 <211> LENGTH: 1059
      152 <212> TYPE: DNA
      153 <213> ORGANISM: Homo sapiens
      155 <220> FEATURE:
      156 <221> NAME/KEY: misc_feature
      157 <222> LOCATION: (1)..(1059)
      158 <223> OTHER INFORMATION: All n's are unknown
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RAW SEQUENCE LISTING

DATE: 07/25/2002

PATENT APPLICATION: US/10/081,327A

TIME: 08:42:12

Input Set : A:\SEQUENCE 081,327.txt

Output Set: N:\CRF3\07252002\J081327A.raw

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W--> 162 gnnnnnttga ancccttnag anccggnecc gacgtencat gctccccggcc gcctggccgc      60
      164 gggatatcac tagtgccggc gcctgcaggt cgaccataat gagttgtagc aaatccacac      120
      166 tttgtagttg ggaggaggag agctggtggc caatgtttgt ccaactgttt atttttcgag      180
      168 acccagccta ttgaggaagg cttgttcaag caggcttcgt tcctacaaac acacaaacat      240
      170 ccttctgttt gcctacaaag aaaaggggac cagcgctgga tttgcatgcg aatgaggagc      300
      172 cccgggagga gacgtccttg cccatcaaag gccgcgtag cctggcggcc ctccagcctt      360
      174 gttccagcac ctgctgcctt gcacggcctg acggggccgc gccccgcgt cctggctcgc      420
      176 ccatccaggg tccacggctc actcgtccct cgctgcccc gcggccacac ctctgcagc      480
      178 tcatacctca cccgccccgc ggccctgctt cccccagtct catctctcgc ggagcaggcc      540
W--> 180 cgcagggtct gcaaggccaa gaacggaacc ccaaaccgan aggggtgggga ggtgagccgg      600
      182 caggacgcaa aactcggaat cgaggcggct tgggtttaca cgttccttta ctctggctca      660
      184 cgctggtctt cacctggtta tgggagagct tcccaacgcg ttggatgcat aacttgagta      720
W--> 186 ttctatagtg gcacctaaat aagctttggc gtaaacatgg gcatanctgg ntctctngnt      780
W--> 188 gaaattggtg tccgnttcac aattccccac aacataacaa gcccggagac nttaaagngg      840
W--> 190 aaaagctggg gtgcctaatt agggactnac tcacattaat tgcgntgggc ttacttgccc      900
W--> 192 nttttccaan cgggnaaaac ttctcngcca acttgcaatt aatgaatcgg caaanccccc      960
W--> 194 ngnanaggcg ntttgnghaa tgggcctttt cccttcttgg ttnnttaatn nntnggntng     1020
W--> 196 gccnttggtt nngcaacggg ntaantantn aaagggggg      1059
      199 <210> SEQ ID NO: 5
      200 <211> LENGTH: 895
      201 <212> TYPE: DNA
      202 <213> ORGANISM: Homo sapiens
      204 <220> FEATURE:
      205 <221> NAME/KEY: misc_feature
      206 <222> LOCATION: (1)..(895)
      207 <223> OTHER INFORMATION: All n's are unknown
      210 <400> SEQUENCE: 5
W--> 211 gtngcatgct cccggccgcc atggccgcgg gatatacta gtgcggccgc ctgcaggctc      60
W--> 213 accataaata tagagccaaa ccgtccaccc agccgtggcg cgaatctctt gnccccaac      120
      215 tctcaagtgt cctttggctc tggagctcct gggcccggtt tccgcatccg ggaggagaaa      180
W--> 217 ggagcgagcg cgcacggtgc ctcccagagg caggagcan aggagaggaa aggggaagac      240
W--> 219 tatgaaacgt nctaactaat gcgcgtactg aatgcgcatt cacgtggtca gttaccgatg      300
W--> 221 tgcttctctc tctcctggcc cgcagggaca gacgcgcgca gggacgtgcc agccccgnc      360
W--> 223 ccggctctgc acatttacta tgtgacctcc tgnagtcatt ctctctccca gtccatagatg      420
      225 agatcttaga gctcacgcaa gcttgccctg tggaacagac taagtatctg actttgcggg      480
W--> 227 gatgtcctga tgcccacna aggacagaaa tcttgacac ttgcggatgn gctttatggg      540
W--> 229 agaagctcca acgcccgttg atgcataget ttgggnattc tatagngcac cttnnatagct      600
W--> 231 ttggcgnaan tcatggncat ngntggnttn ctgngggaaa tggatatccg ttacaatttc      660
W--> 233 acacaacata caaccgggaa gcantaaagt ngtaaagcct gggtgcccaa tnggggggng      720
W--> 235 ctaanttcca ttaattgggg tggcncannt gccgntttca gtcgggggaaa acctggntgg      780
W--> 237 ccanctggnt tnttggnnnt ggccannccc ggggagaggn ggntttggga anttggnnng      840
W--> 239 tntttcgctt nctgggttnt gagttcgtng ggttgggcct ttcggntggg gnang      895
      242 <210> SEQ ID NO: 6
      243 <211> LENGTH: 900
      244 <212> TYPE: DNA
      245 <213> ORGANISM: Homo sapiens
      247 <220> FEATURE:
      248 <221> NAME/KEY: misc_feature
      249 <222> LOCATION: (1)..(900)

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002

TIME: 08:42:12

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250 <223> OTHER INFORMATION: All n's are unknown

253 <400> SEQUENCE: 6

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258 actgaggcga agaccgcgcc ccggagtgtg ggccgccttc ccagtaaatac tgcttatgag 180
W--> 260 aggaagtgat ggaccagatg ctcaaggggt agggactaga ttttgcctta canaggacaa 240
W--> 262 gtcagtctct gaagagaagt cgcggagagg gacgcanaac gcagtgggac ggaanggtct 300
264 cggggaaagt gggcttgcgc agaagtgccg gggagctcgt ggggaagtgc gagagccgct 360
266 gggattcggc caggaaaaagc gagagtgcgc gaacaagctt cacagaaatg gccttatggg 420
W--> 268 agaactccca acgcgttggg tgcntagctt gantatctat agtgccccct aaatacttgg 480
W--> 270 cgtaatcatg gtcatanctg tttcctgtgt taaattgtta tccgctcnen attccccgca 540
W--> 272 cctacgaacc ngaaacctaa ntntaaacct ggggtgctaa taattancna actcccatta 600
W--> 274 attgcnttgc cnnctgccc ctttccatcg ggaaccgcgc ttcacttcn ttaatgaatc 660
W--> 276 gccccccccc gaaaaggggt gcttttnggg ccttccttcc cccctaatac ctgncngcn 720
W--> 278 tcggtncggn acgttctctc ccaggngtat tcgtttccga acngggncce gaaanntnac 780
W--> 280 aagcctnagg cgacctnaag gcntncngnt tccnggnccc cegananccc aatnaccctt 840
W--> 282 ttagnngaac cccggnataa accggttncc gaaccccttg ctnnttcccc cntagnaan 900

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285 <210> SEQ ID NO: 7

286 <211> LENGTH: 730

287 <212> TYPE: DNA

288 <213> ORGANISM: Homo sapiens

290 <220> FEATURE:

291 <221> NAME/KEY: misc_feature

292 <222> LOCATION: (1)..(730)

293 <223> OTHER INFORMATION: All n's are unknown

296 <400> SEQUENCE: 7

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W--> 301 gttgaggggtg gtcccttggg tcccagaga agctgcccc cagaggctct cananccan 180
W--> 303 gggacggggg ggtggagccc gttgcacagt catgcantgc anctggggca ggaagcgaga 240
W--> 305 gtgaggaggg gggagggcac agcccgcgga ngcaaggcgg gtgcagggtc tctggggacc 300
W--> 307 gagggaggtg ccagaagtgt agccctgaag ccctgtgggc ccctgggcgc agggccanct 360
W--> 309 caggccccca nggattngac tcctgnacct gacattttcn atanaaaacc cccgggaccc 420
W--> 311 ctataacctc tccccgntg gttgncggcc ttttgggnaa ttnttttttt gaaaaccccc 480
W--> 313 ncccccttgg atccaactgn atttncctta ttttccccca aaactngggg tnnccagncc 540
W--> 315 aaccttttcc cttttaaaat ttttnccccc cccnttcccc cccctnnaac ccccaanaa 600
W--> 317 nttttttnccc cnggnntncc naaaatcanc ccccatTTTT tcccccccc ccmctcngg 660
W--> 319 aaantttttc tctnttttta tntccccccg gaaaaaaggg tttntncccc cccccnaac 720
W--> 321 acctttttcc 730

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324 <210> SEQ ID NO: 8

325 <211> LENGTH: 925

326 <212> TYPE: DNA

327 <213> ORGANISM: Homo sapiens

329 <220> FEATURE:

330 <221> NAME/KEY: misc_feature

331 <222> LOCATION: (1)..(925)

332 <223> OTHER INFORMATION: All n's are unknown

335 <400> SEQUENCE: 8

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002

TIME: 08:42:12

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Output Set: N:\CRF3\07252002\J081327A.raw

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338 tcactagtgc ggccgcctgc aggtcgacca taatccctac accaaccctg ccaggagggt 120
W--> 340 tttctaangg cattttacag atgagcaaac tgtaccagcc agagtctcca aagcgcgggc 180
W--> 342 accccacact gntttnctnct tggcgngggg tgggggggtct cttagagggg gtaagagcac 240
W--> 344 caggagcccc aggcagcccc gntnccact ctggctgccc ggaccgtncg ggagccacgt 300
W--> 346 cccncccaa aggaggcccc ttacctgcgg gggcacctnc cgggcgcctc gcgtgtcggg 360
W--> 348 cccaaagcca ccgaggtcgg gagecgtcgg ctatactcgg tctctnctct gcccgnccgg 420
W--> 350 ccccgagctn ctactgcang cgggcccgcg gccctttctt ggttcnctt gctagncccc 480
W--> 352 cncngctgan ggcccacatna ncmtncgg aggaggagg gaggcgcgtt ggtggccnga 540
W--> 354 ggcggcggtt ntattgctta cttgntcgg ggggtggggg nntctnagan tgggtcnanc 600
W--> 356 tnnntggggn ggcttctnnt gtngncccn ctaangnggg gngcatttnt tgcnnnngga 660
W--> 358 nnnngcccn nngnggggnt tnnnnnaaa gttttttgt ctgannnnca agcantngnn 720
W--> 360 tgganttant ttgngngggg angnnccnc nacnngggnn gtannngttg nnnnagtttt 780
W--> 362 tnnnaggggc cnnanagnan ggnnngngnn nngntgatng ngnttgcnt ngntaggnnt 840
W--> 364 gnnntnctnt tnnnatggn nttnatnatn nnnngcnnna nntgngnagg gngatncntt 900
W--> 366 ngngnctnt gtngngntnt ttcng 925
369 <210> SEQ ID NO: 9
370 <211> LENGTH: 1047
371 <212> TYPE: DNA
372 <213> ORGANISM: Homo sapiens
374 <220> FEATURE:
375 <221> NAME/KEY: misc_feature
376 <222> LOCATION: (1)..(1047)
377 <223> OTHER INFORMATION: All n's are unknown
380 <400> SEQUENCE: 9
W--> 381 ccttnganc cggcccgcag tcnatgctc ccggccgcct ggccgcggga tatcactagt 60
383 gggccgcct gcaggtcgac cataactctc gaggtttcct cttcccccac ctcatctgc 120
385 tagccctgac gtgaggggat aggtgacctc tgcgcgtatt cccatgtaga tacgacagat 180
387 ggaacgtaac tgcggttggc caggggctcc gcagtggctg gggcgccgga gtgcgtgct 240
389 ctgactttcc ggtgccgggc tctgtctcca ggctggaaat gtgctcctag ctctcctagg 300
391 gggacctgga cctaggggag gagattgggc ggagcccgcg gagtgtgccc aacctatgga 360
393 ccacgtggg cctggtctcc tgcgagcgtc ccgggctgtc cctgccggtg catcggggtt 420
395 ccacgtcctg gggagagacg aagatgccct gggaaagata aacagccaag ttttgtcccc 480
397 ggaggaaaga agcttggaac tggctccctgt gtctgctgcg gggagggccca ggggataagt 540
399 gcgggtgcct gccgcctcc cttgtagaac ttggcgtctc gcacctttta taaacgccag 600
W--> 401 gatccgaggc cagaagttag ntggtggcca ggntagctgc tgaatgggtt gtggangaca 660
W--> 403 aggangtgga tgctggccag ggaagatgtg cttgtcaggt angtaactcg gacaagaaga 720
W--> 405 actntggccc ctgaggaaga acagaacca aggcacttct ggagcaattt ctggcntggg 780
W--> 407 gtgataaaaag gaacttggtt tnaggnaga cacatnctta tgggagaact tcccaacgcc 840
W--> 409 gttggatcat aactttgaga ttctataagg gccctaaaaa aantttggcg gaaannatgg 900
W--> 411 gcaaaaanttg tcccggggg aaatngtann ccntttacaa attncncaa cntncgancc 960
W--> 413 cgaaccttaa anggnaaanc ccggggggcc taangngnga nctaactccc attaaatggn 1020
W--> 415 nnggcnnnat ngccntttt caanncg 1047
418 <210> SEQ ID NO: 10
419 <211> LENGTH: 634
420 <212> TYPE: DNA
421 <213> ORGANISM: Homo sapiens
423 <220> FEATURE:
424 <221> NAME/KEY: misc_feature
425 <222> LOCATION: (1)..(634)

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002
TIME: 08:42:13

Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:1; N Pos. 282,289,294,308,318,320,334,350,353,354,359,370,371,377,384
Seq#:1; N Pos. 390,404,412,413,417,432,438,439,443,446,457,464,467,468,471
Seq#:1; N Pos. 477,486,503,506,511,512,513,518,524,528,540,551,553,554,565
Seq#:1; N Pos. 568,580,592,601,617,622,628
Seq#:2; N Pos. 17,48,78,102,109,229,271,312,318,337,350,356,401,436,452,470
Seq#:2; N Pos. 478,498,499,503,508,513,519,523,524,532,539,550,560,564,568
Seq#:2; N Pos. 573,583,585,590,608,610,612,613,615,616,623,625,631,636,640
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Seq#:3; N Pos. 744,755,764,776,778,796,800,801,805,812,814,822,825,828,833
Seq#:3; N Pos. 836,837,840,842,843,849,853,857,859,866,868,873,874,876,877
Seq#:3; N Pos. 881,882,883,889,892,894,895,901,903,908,909,912,913,921,928
Seq#:3; N Pos. 930,939,940,950
Seq#:4; N Pos. 2,3,4,5,6,12,18,22,27,37,580,766,771,778,795,831,838,868,885
Seq#:4; N Pos. 901,910,915,926,955,961,963,965,971,976,978,1003,1004,1010
Seq#:4; N Pos. 1011,1012,1014,1017,1019,1024,1031,1032,1041,1045,1048,1050
Seq#:5; N Pos. 3,112,220,251,359,393,499,530,576,586,593,594,607,610,617
Seq#:5; N Pos. 621,623,627,630,634,684,691,712,719,725,745,748,749,755,777
Seq#:5; N Pos. 784,789,792,797,798,799,806,807,820,823,832,837,838,840,842
Seq#:5; N Pos. 851,858,869,886,892,894
Seq#:6; N Pos. 80,107,233,277,295,444,453,497,528,530,551,561,563,587,589
Seq#:6; N Pos. 606,612,613,650,687,697,714,717,720,726,730,746,763,767,775
Seq#:6; N Pos. 776,778,787,797,803,805,807,809,814,817,825,827,834,845,856
Seq#:6; N Pos. 868,883,884,893,897,900
Seq#:7; N Pos. 2,15,79,173,175,180,217,222,271,358,371,377,386,400,404,438
Seq#:7; N Pos. 445,458,463,481,500,505,526,532,533,538,545,565,574,586,587
Seq#:7; N Pos. 596,599,601,607,612,615,616,618,621,629,642,653,654,658,664
Seq#:7; N Pos. 674,682,700,705,707,717,724
Seq#:8; N Pos. 10,11,14,23,29,35,40,128,192,195,198,207,262,265,288,305,339
Seq#:8; N Pos. 406,416,430,439,455,466,467,476,482,484,490,499,501,503,504
Seq#:8; N Pos. 506,538,551,565,568,581,582,586,590,597,599,602,603,604,609
Seq#:8; N Pos. 610,616,619,620,623,625,626,630,635,637,642,649,654,655,656
Seq#:8; N Pos. 657,661,662,663,666,670,671,672,674,679,683,684,685,686,687
Seq#:8; N Pos. 690,705,706,707,708,715,717,719,720,725,729,734,737,742,744

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/081,327ADATE: 07/25/2002
TIME: 08:42:13Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

Seq#:8; N Pos. 745,749,751,754,755,758,759,760,764,765,767,771,772,773,774
Seq#:8; N Pos. 782,783,784,792,793,795,798,800,803,804,805,807,809,810,811
Seq#:8; N Pos. 812,814,819,821,823,828,829,831,833,838,840,842,843,844,846
Seq#:8; N Pos. 849,852,853,854,855,859,860,861,863,864,867,870,871,872,873
Seq#:8; N Pos. 877,878,879,881,882,885,887,892,896,898,901,903,905,908,909
Seq#:8; N Pos. 913,915,917,919,924
Seq#:9; N Pos. 6,9,23,621,633,656,665,702,724,776,802,807,816,883,895,896
Seq#:9; N Pos. 907,925,929,930,933,944,947,952,954,958,972,975,979,994,996
Seq#:9; N Pos. 998,1001,1020,1021,1022,1026,1027,1028,1031,1036,1044,1045
Seq#:10; N Pos. 29,40,56,115,123,129,157,206,220,247,262,272,281,283,313
Seq#:10; N Pos. 323,334,358,359,361,365,372,379,387,404,411,442,447,463,466
Seq#:10; N Pos. 488,489,512,513,515,516,524,526,529,530,542,550,564,569,570
Seq#:10; N Pos. 574,577,584,600,602,606,610,611,628,632
Seq#:11; N Pos. 2,38,51,79,80,83,85,88,92,106,112,115,134,135,150,190,208
Seq#:11; N Pos. 213,215,218,250,254,278,279,328,339,363,389,393,394,406,408
Seq#:11; N Pos. 417,419,421,428,433,440,441,444,447,451,459,467,469,470,472
Seq#:11; N Pos. 475,483,485,495,503,505,519,531,538,542,551,552,566,573,584
Seq#:11; N Pos. 587,600,601,605,609,612,614,618,619,621,623,624,628,630,636
Seq#:11; N Pos. 638
Seq#:12; N Pos. 3,73,106,147,170,221,236,260,352,360,364,372,380,437,459
Seq#:12; N Pos. 461,478,483,489,502,507,508,535,536,538,549,562,571,580,585
Seq#:12; N Pos. 599,601,602,605,606,615,632,647,648,669,678,682,706,707,712
Seq#:12; N Pos. 727,740,744,745,750,752,754,755,759,760,762,763,765,767,770
Seq#:12; N Pos. 774,776,780,786,787,792,805,807,814,832,838,840,849,850,857
Seq#:12; N Pos. 858,867,872,873,875,876,879,885,886,900,901,906,909,913,920
Seq#:12; N Pos. 929,930,934,935,938,940,943,949,950,951,959,966,968,969,973
Seq#:12; N Pos. 978,983,986,987,991,994,1003,1005,1006,1010,1017,1019,1020
Seq#:12; N Pos. 1021,1024,1026,1027,1030,1033,1037,1041,1044,1045
Seq#:13; N Pos. 132,147,173,188,190,196,198,213,235,261,268,293,297,312,325
Seq#:13; N Pos. 337,340,353,400,418,424,430,431,444,446,476,479,481,518,522
Seq#:13; N Pos. 539,542,555,569,572,576,579,600
Seq#:14; N Pos. 33,74,121,145,165,170,179,182,185,197,203,206,226,238,256
Seq#:14; N Pos. 271,279,299,300,310,317,326,331,343,347,367,377,381,387,390
Seq#:14; N Pos. 410,415,417,418,423,435,438,440,443,450,451,455,460,478,487
Seq#:14; N Pos. 489,491,494,511,512,513,515,519,522,523,528,534,537,539,540
Seq#:14; N Pos. 544,549,552,555,559,561,563,569,584,587,588,596,599,600,602
Seq#:14; N Pos. 608,609,611,617,619,625,632,635,636,640,651,655,657,664,665
Seq#:14; N Pos. 675,680,685,687,689,690,693,694,708,713,719,723,724,730,732
Seq#:14; N Pos. 736,737,740,742,745,746,748,750,754,758,760,767,773,774,777
Seq#:14; N Pos. 778,780,781,783,787,791,795,800,803,811,812,813,818,824,825
Seq#:14; N Pos. 832,834,836,839,844,846,848,851,858,859,860,863,869,870,871
Seq#:14; N Pos. 872,873,877,880,884,885,895,896,901,902,904,909,910,913,915
Seq#:14; N Pos. 916,919,920,923,924,927
Seq#:15; N Pos. 5,202,212,242,247,254,255,256,275,292,305,307,319,332,336
Seq#:15; N Pos. 341,384,385,398,420,429,447,448,451,452,458,464,472,485,488
Seq#:15; N Pos. 490,503,506,516,528,533,542,544,550,559,563,567,575,584,598
Seq#:15; N Pos. 600,608,609,612,617,621,624,625,630,633,649,656,657,658,663
Seq#:15; N Pos. 665,666,673,677,678,684,696,697,712,715,716,717,719,729,731
Seq#:15; N Pos. 734,738,741,742,743,744,770,771,787,788,789,790,792,794,795

RAW SEQUENCE LISTING ERROR SUMMARY
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Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

Seq#:15; N Pos. 796,797,798,799,802,804,810,811,813,816,818,819,822,826,831
Seq#:15; N Pos. 832,834,835,838,846,848,857,858,861,867,869,873,874,877,881
Seq#:15; N Pos. 883
Seq#:16; N Pos. 91,411,472,485,503,528,537,542,544,550,565,566,573,603,613
Seq#:16; N Pos. 644,657,659,665,669,673,692,701
Seq#:17; N Pos. 3,44,117,129,130,185,220,346,352,379,400,402,415,419,473
Seq#:17; N Pos. 497,503,512,518,537,544,545,559,578,613,619,637,641,643,652
Seq#:17; N Pos. 655,660,670,675,679,683,684,689,696,698,703,706,709,712,714
Seq#:17; N Pos. 721,727,732,735,743,745,750,766,771,790,791,792,795,801,803
Seq#:17; N Pos. 806,807,809
Seq#:18; N Pos. 2,5,29,30,70,81,82,85,90,91,93,95,112,167,172,175,184,225
Seq#:18; N Pos. 231,239,240,255,260,261,270,273,275,301,304,317,335,351,367
Seq#:18; N Pos. 376,379,386,388,390,394,395,396,398,400,403,406,411,422,425
Seq#:18; N Pos. 430,434,438,447,458,465,467,469,470,475,481,482,496,505,515
Seq#:18; N Pos. 516,518,525,531,537,540,550,555,556,557,559,561,582,600,602
Seq#:18; N Pos. 603,606,619,621,624
Seq#:19; N Pos. 5,11,22,36,43,78,108,117,118,142,166,167,169,178,199,208
Seq#:19; N Pos. 210,212,225,227,235,241,250,259,263,279,300,314,319,320,332
Seq#:19; N Pos. 336,344,346,358,364,369,372,383,386,397,401,415,421,430,433
Seq#:19; N Pos. 434,441,463,465,474,481,482,511,518,520,525,527,530,535,538
Seq#:19; N Pos. 554,555,559,563,568,576,586,592,593,604,607,613,628,639,644
Seq#:19; N Pos. 650
Seq#:20; N Pos. 6,103,129,159,191,306,335,345,378,380,395,407,426,454,461
Seq#:20; N Pos. 463,468,471,506,509,510,525,564,570,572,574,578,584,600,613
Seq#:20; N Pos. 621,624,634,635,645,651,658,664,669,674,678,679,680
Seq#:21; N Pos. 1,2,8,9,16,17,18,19,20,21,229,271,311,317,398,410,415,421
Seq#:21; N Pos. 423,429,433,440,453,457,462,476,478,480,496,500,511,512,513
Seq#:21; N Pos. 514,517,520,529,534,535,546,547,550,554,558,570,573,574,587
Seq#:21; N Pos. 598,599,602,609,611
Seq#:22; N Pos. 6,7,12,22,25,30,32,56,60,111,114,125,136,138,143,194,202
Seq#:22; N Pos. 234,248,266,291,311,312,329,333,342,344,372,374,382,388,393
Seq#:22; N Pos. 400,404,416,444,448,449,455,467,482,488,497,507,508,509,518
Seq#:22; N Pos. 526,527,530,532,533,534,546,552,556,562,567,570,577,594,595
Seq#:22; N Pos. 597,609,610,618,619,621,626,630,642,643,645,648,650,652,661
Seq#:22; N Pos. 672,673,676,681,685,687,690,694,697,699,702,706,712,716,718
Seq#:22; N Pos. 722,726,730,731,734,741,743,744,747,753,761,762,767,769,770
Seq#:22; N Pos. 771,773,774,784,787,797,802,804,810,833,837,839,840,843,845
Seq#:22; N Pos. 849,850,853,860,861,868,871,876,877,885,886,892,893,894,899
Seq#:22; N Pos. 900,915,920,923,932,940,952,959,963,965,972,977,990,992,996
Seq#:22; N Pos. 998,999,1004,1013,1017,1019,1021,1026,1029,1030,1034,1035
Seq#:22; N Pos. 1039,1040,1058,1060,1061,1062,1064,1068,1074,1075,1077,1078
Seq#:22; N Pos. 1080,1087,1088,1091,1095,1096,1101,1108,1116,1132,1141,1147
Seq#:22; N Pos. 1149,1150,1157,1158,1164,1165
Seq#:23; N Pos. 11,13,58,100,178,184,209,224,300,351,374,426,440,455,477
Seq#:23; N Pos. 496,510,523,527,531,547,549,554,568,569,578,582,595,602,606
Seq#:23; N Pos. 616,618,624
Seq#:24; N Pos. 1,4,7,8,9,13,15,16,17,21,64,66,67,68,69,70,76,77,84,101,106
Seq#:24; N Pos. 112,137,146,151,171,184,190,192,241,251,252,256,258,274,296
Seq#:24; N Pos. 304,306,325,329,341,343,372,399,417,435,438,443,467,471,474

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002
TIME: 08:42:13

Input Set : A:\SEQUENCE 081,327.txt
Output Set: N:\CRF3\07252002\J081327A.raw

Seq#:24; N Pos. 501,508,510,527,547,548,557,558,564,566,568,575,583,589,591
Seq#:24; N Pos. 595,599,601,602,604,609,610,614,616,617,618,624,627,640,652
Seq#:24; N Pos. 657,659,663
Seq#:25; N Pos. 48,78,184,212,282,293,376,398,414,429,442,466,470,473,486
Seq#:25; N Pos. 491,514,519,525,541,544,550,572,598,605,626
Seq#:26; N Pos. 372,418,420,433,452,474,487,493,498,514,535,549,554,556,559
Seq#:26; N Pos. 566,567,569,583,586
Seq#:27; N Pos. 251,278,322,334,340,356,357,367,370,401,413,414,420,432,441
Seq#:27; N Pos. 447,452,453,458,459,462,489,497,504,510,515,519,530,536,540
Seq#:27; N Pos. 544,545,557,559,560,564,577,581,582,583,589,596,597
Seq#:28; N Pos. 19,35,73,76,82,135,206,209,213,215,217,236,238,245,247,256
Seq#:28; N Pos. 267,281,292,300,308,331,356,358,363,378,406,410,412,418,422
Seq#:28; N Pos. 440,471,475,477,485,513,516,551,561,564,572,580,610
Seq#:29; N Pos. 3,74,171,187,203,258,265,282,294,297,300,307,315,340,355
Seq#:29; N Pos. 360,367,373,374,386,392,401,427,432,433,439,441,449,457,458
Seq#:29; N Pos. 476,480,493,496,497,504,509,517,523,526,527,533,543,551,552
Seq#:29; N Pos. 554,556,558,563,564,565,570,576,577,579,581,582
Seq#:30; N Pos. 1,3,9,10,18,20,21,183,287,386,413,418,421,434,438,442,452
Seq#:30; N Pos. 456,458,463,468,469,473,475,496,505,506,511,529,533,535,537
Seq#:30; N Pos. 539,540,544,545,547,554,562,570,571,577,582,584,585,590,592
Seq#:30; N Pos. 598,599,600,609,614,618,620
Seq#:33; N Pos. 45,64,139,140,175,191,220,229,238,246,265,292
Seq#:34; N Pos. 182
Seq#:35; N Pos. 140,183
Seq#:36; N Pos. 59,104,168,193,219,239,250,266,284
Seq#:41; N Pos. 49,112,135,159

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/081,327A

DATE: 07/25/2002

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Input Set : A:\SEQUENCE 081,327.txt

Output Set: N:\CRF3\07252002\J081327A.raw

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:37 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:39 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:60
L:41 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:120
L:43 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:180
L:45 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:240
L:47 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:300
L:49 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:360
L:51 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:420
L:53 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:480
L:55 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:540
L:57 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:600
L:72 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:74 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:60
L:78 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:180
L:80 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:240
L:82 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:300
L:84 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:360
L:86 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:420
L:88 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:480
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:540
L:92 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:600
L:94 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:660
L:96 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:720
L:98 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:780
L:100 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:840
L:102 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:900
L:117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:60
L:121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:120
L:123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:180
L:125 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:240
L:127 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:300
L:129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:360
L:131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:420
L:133 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:480
L:135 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:540
L:137 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:600
L:139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:660
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:720
L:143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:780
L:145 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:840
L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:900
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:180 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:540
L:186 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:720
L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:780
L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:840

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/081,327A

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Input Set : A:\SEQUENCE 081,327.txt

Output Set: N:\CRF3\07252002\J081327A.raw

L:192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:900
L:194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:960
L:196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:1020